WHAT IS CLAIMED IS:

1. A method for preventing contamination of a heat exchanger made of a metal base material, comprising:

providing a film on a surface of the metal base material, the film generating an active oxygen when contacting water; and

reducing an amount of organic substances adhered onto the surface of the metal base material by using the generated active oxygen.

2. The method for preventing contamination of a heat exchanger according to claim 1, wherein the active oxygen is generated, when condensed water generated on the surface of the metal base material contacts the film, and when the oxygen dissolved in the condensed water is activated.

3. The method for preventing contamination of a heat exchanger according to claim 2, wherein the contact between the film and the condensed water is prevented and generation of the active oxygen is terminated, by drying the surface of the metal base material.

4. The method for preventing contamination of a heat exchanger according to claim 2, wherein the contact between the film and the condensed water is prevented, and the active-oxygen generating capacity is regenerated by drying the surface of the metal base material.

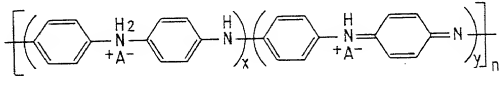
5. The method for preventing contamination of a heat exchanger according to claim 1, wherein the metal base material is made of aluminum.

6. The method for preventing contamination of a heat exchanger according to claim 1, wherein the film is made of an electron donating polymer.

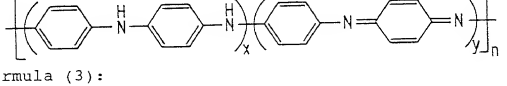
7. The method for preventing contamination of a heat exchanger according to claim 6, wherein the electron donating polymer is made of a polyaniline or a derivative of the polyaniline.

8. The method for preventing contamination of a heat exchanger according to claim 7, wherein the polyaniline is made of a polymer containing at least one of polyanilines represented by the following chemical formulas (1) to (4):

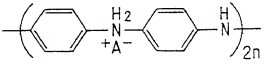
formula (1):



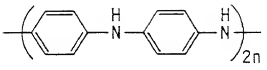
formula (2):



formula (3):



formula (4):



wherein, "A" indicates an anion, "n" indicates an integer in a range of 2 - 5000, "x" and "y" are the numbers which simultaneously satisfy the following equations: $x + y = 1$ and $0 \leqq y \leqq 0.5$.

9. A heat exchanger made of a metal base material comprising:

a film provided on the metal base material, which generates an active oxygen when contacting water.

10. The heat exchanger according to claim 9, wherein the film is disposed to contact condensed water generated thereon, in such a manner that the active oxygen is generated in the condensed water.

11. The heat exchanger according to claim 9, wherein the metal base material is made of aluminum.

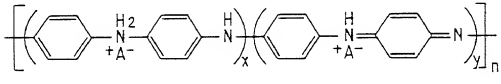
12. The heat exchanger according to claim 9, wherein the film is made of an electron donating polymer.

13. the heat exchanger according to claim 12, wherein the electron donating polymer is a polyaniline or a derivative

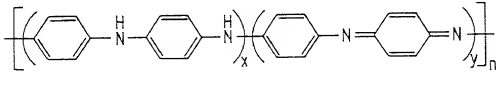
thereof.

14. The heat exchanger according to claim 13, wherein the polyaniline is made of a polymer containing at least one of polyanilines represented by the following chemical formulas (1) to (4),

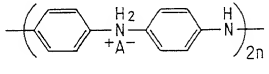
formula (1):



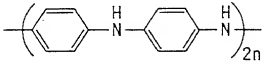
formula (2):



formula (3):



formula (4):



wherein, "A" indicates an anion, "n" indicates an integer in a range of 2 - 5000, "x" and "y" are the numbers which simultaneously satisfy the following equations: $x + y = 1$ and $0 \leqq y \leqq 0.5$.

15. The heat exchanger for a vehicle air conditioner, comprising:

a heat exchanging portion in which a fluid flowing therein is heat-exchanged with air, the heat exchanging portion is made of a metal base material; and

a film provided on the metal base material, which generates an active oxygen when contacting water.

16. The heat exchanger according to claim 15, wherein the fluid is a refrigerant for cooling air.